

CLAIMS

*Gulb 1*  
1. For a population of entities, a method of determining a personalized ratee  
reputation of a first entity from the perspective of a second entity associated with the first  
entity by one or more rating paths, wherein a rating path comprises one or more rating  
links, each rating link defining a rating of a rated entity provided by a rating entity,  
wherein each rating path has a length defined as a number of rating links comprised in  
the path, and each entity comprised on one of the rating paths has a level defined as a  
number of rating links between the entity and the second entity, the method comprising  
acts of:

10 (A) performing a breadth-first search beginning at the second entity to  
determine, from the one or more rating paths, one or more first rating paths that  
have a first length equal to a shortest length between the first entity and the  
second entity;

15 (B) for each determined first rating path, identifying a third entity on  
the first rating path that has a level equal to one less than the first length;

(C) for each identified third entity, determining a first rating of the  
first entity provided by the third entity;

(D) combining the first ratings; and

20 (E) producing the personalized ratee reputation by weighting the  
combined first ratings by an amount according to the first length.

2. The method of claim 1, wherein act (D) comprises calculating an average  
of the first ratings.

25 3. The method of 2, wherein calculating the average comprises, for each first  
rating, weighting the first rating as a function of a personalized ratee reputation of the  
corresponding third entity from the perspective of the second entity, the weighting being  
relative to personalized ratee reputations of the other third entities from the perspective  
of the second entity.

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*Gulb 2*  
4. The method of claim 3, further comprising an act of:

*Gulb 3*

(F) for each third entity, determining the personalized ratee reputation of the third entity from the perspective of the second entity, comprising:

5 (1) determining one or more fourth entities that are on one of the first rating paths, that have provided a second rating of the third entity and that have a level equal to one less than the level of the third entity; and

10 (2) combining the second ratings to produce the personalized ratee reputation of the third entity from the perspective of the second entity.

15 5. The method of claim 4, wherein act (F)(2) further comprises, for each third entity, calculating an average of the second ratings to determine the personalized ratee reputation of the third entity from the perspective of the second entity.

20 6. The method of claim 1, further comprising acts of:

(F) for each identified third entity, determining if the third entity has provided more than one rating of the first entity; and

(G) for each third entity determined to have provided more than one rating of the first entity, selecting a most recent rating of the more than one ratings as the first rating of the first entity provided by the third entity.

25 7. The method of claim 1, further comprising an act:

(F) determining whether to transact with the first entity based at least in part on the personalized ratee reputation of the first entity from the perspective of the second entity.

30 8. The method of claim 1, further comprising an act of:

(F) determining a price to pay for a good or service of the first entity based at least in part on the personalized ratee reputation of the first entity from the perspective of the second entity.

9. The method of claim 1, further comprising an act of:

(F) determining a price to pay for insuring a quality of a good or service of the first entity based at least in part on the personalized ratee reputation of the first entity from the perspective of the second entity.

5        10. A system for determining, in a population of entities, a personalized ratee reputation of a first entity from the perspective of a second entity associated with the first entity by one or more rating paths, wherein a rating path comprises one or more rating links, each rating link defining a rating of a rated entity provided by a rating entity, wherein each rating path has a length defined as a number of rating links comprised in  
10      the path, and each entity comprised on one of the rating paths has a level defined as a number of rating links between the entity and the second entity, the system comprising:

15        a path-searching module to receive as input an indication of the first entity and an indication of the second entity, to perform a breadth-first search beginning at the second entity to determine, from the one or more rating paths, one or more first rating paths that have a first length equal to a shortest length between the first entity and the second entity, and to provide as output an indication of the one or more first rating paths;

20        a first look-up module to receive as input the indication of the one or more first rating paths, to identify, for each determined first rating path, a third entity on the first rating path that has a level equal to one less than the first length, and to provide as output an indication of the one or more third entities;

25        a second look-up module to receive as input the indication of the first entity and the indication of the one or more third entities, to determine, for each third entity, a first rating of the first entity provided by the third entity, and to provide as output the first ratings; and

30        a ratings combining module, to receive as input the first ratings, to generate the personalized ratee reputation by combining the first ratings and weighting the combined first ratings by an amount according to the first length, and to provide as output the personalized ratee reputation.

35        11. The system of claim 10, wherein the ratings combining module is further operative to calculate an average of the first ratings.

12. The system of claim 11, wherein the ratings combining module is further operative, for each first rating, to weight the first rating as a function of a personalized ratee reputation of the corresponding third entity from the perspective of the second entity, the weighting being relative to personalized ratee reputations of the other third entities from the perspective of the second entity.

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13. The system of claim 12, wherein the personalized reputation generator is further operative to determine, for each third entity, the personalized ratee reputation of the third entity from the perspective of the second entity, and further comprises:

10 a processing module to receive as input an indication of the one or more first rating paths and an indication of the one or more third entities, to determine, for each third entity, one or more fourth entities that are on one of the first rating paths, that have provided a second rating of the third entity and that have a level equal to one less than the level of the third entity, and to output an indication of the second ratings, and

15 wherein the ratings combining module is further operative to receive the indication of the second ratings, and to combine the second ratings to produce the personalized ratee reputation of the third entity from the perspective of the second entity.

20 14. The system of claim 13, wherein, for each third entity, to determine the personalized ratee reputation of the third entity from the perspective of the second entity, the ratings combining module is further operative to calculate an average of the second ratings.

25 15. The system of claim 10, wherein the second look-up module is operative to, for each identified third entity, determine if the third entity has provided more than one rating of the first entity, and for each third entity determined to have provided more than one rating of the first entity, to select a most recent rating of the more than one ratings as the first rating of the first entity provided by the third entity.

30 16. The system of claim 10, wherein the system further comprises:

a transaction module that receives the determined personalized ratee reputation, determines whether to transact with the first entity based at least in part on the personalized ratee reputation of the first entity from the perspective of the second entity, and outputs an indication of whether or not to transact with the first entity.

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17. The system of claim 10, wherein the personalized reputation generator is connected to a transaction module that receives the determined personalized ratee reputation, determines a price to pay for a good or service of the first entity based at least in part on the personalized ratee reputation of the first entity from the perspective of the 10 second entity, and outputs an indication of the price.

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18. The system of claim 10, wherein the system further comprises a transaction module that receives the determined personalized ratee reputation, determines for insuring a quality of a good or service of the first entity based at least in part on the personalized ratee reputation of the first entity from the perspective of the second entity, and outputs an indication of the price.

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19. For a population of entities, a system for determining a personalized ratee reputation of a first entity from the perspective of a second entity associated with the first entity by one or more rating paths, wherein a rating path comprises one or more rating links, each rating link defining a rating of a rated entity provided by a rating entity, wherein each rating path has a length defined as a number of rating links comprised in the path, and each entity comprised on one of the rating paths has a level defined as a number of rating links between the entity and the second entity, the system comprising:

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means for performing a breadth-first search beginning at the second entity to determine, from the one or more rating paths, one or more first rating paths that have a first length equal to a shortest length between the first entity and the second entity;

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means for identifying, for each determined first rating path, a third entity on the first rating path that has a level equal to one less than the first length;

means for determining, for each identified third entity, a first rating of the first entity provided by the third entity;

means for combining the first ratings; and  
means for producing the personalized ratee reputation by weighting the combined first ratings by an amount according to the first length.

5        20. A computer program product comprising:  
            a computer readable medium; and  
            computer readable signals stored on the computer readable medium that define instructions that, as a result of being executed by a computer, instruct the computer to perform, for a population of entities, a method of determining a personalized ratee reputation of a first entity from the perspective of a second entity associated with the first entity by one or more rating paths, wherein a rating path comprises one or more rating links, each rating link defining a rating of a rated entity provided by a rating entity, wherein each rating path has a length defined as a number of rating links comprised in the path, and each entity comprised on one of the rating paths has a level defined as a number of rating links between the entity and the second entity, the method comprising acts of:

10                  (A) performing a breadth-first search beginning at the second entity to determine, from the one or more rating paths, one or more first rating paths that have a first length equal to a shortest length between the first entity and the second entity;

15                  (B) for each determined first rating path, identifying a third entity on the first rating path that has a level equal to one less than the first length;

20                  (C) for each identified third entity, determining a first rating of the first entity provided by the third entity;

25                  (D) combining the first ratings; and

                (E) producing the personalized ratee reputation by weighting the combined first ratings by an amount according to the first length.

or add a 28